

What is claimed is:

1. A method for forming a transparent conductive film, comprising the steps of applying, onto a base material, a dispersion containing fine particles of at least one metal selected from the group consisting of indium, tin, antimony, aluminum and zinc,
5 fine particles of at least one alloy consisting of at least two metals selected from the group specified above or a mixture of these fine particles; firing a coated layer in an atmosphere which never undergoes any oxidation of the foregoing metal and/or alloy; and subsequently firing the layer in an oxidizing atmosphere to thus form a transparent conductive film.
- 10 2. The method for forming a transparent conductive film as set forth in claim 1, wherein the non-oxidizing atmosphere is one selected from the group consisting of a vacuum atmosphere, an inert gas atmosphere and a reducing atmosphere.
3. The method for forming a transparent conductive film as set forth in claim 1 or 2,
15 wherein the method further comprises the step of firing the coated layer in a reducing atmosphere or a vacuum atmosphere after the firing step carried out in the oxidizing atmosphere.
4. The method for forming a transparent conductive film as set forth in claim 2 or 3,
20 wherein the inert gas atmosphere is one comprising at least one inert gas selected from the group consisting of rare gases, carbon dioxide gas and nitrogen gas and the reducing atmosphere is one comprising at least one reducing gas selected from the group consisting of hydrogen, carbon monoxide and lower alcohols.
5. The method for forming a transparent conductive film as set forth in claim 2 or 3,
25 wherein the vacuum atmosphere comprises at least one inert gas selected from the group consisting of rare gases, carbon dioxide and nitrogen; at least one oxidizing gas selected from the group consisting of oxygen and water vapor; at least one reducing gas selected from the group consisting of hydrogen, carbon monoxide and lower alcohols; or a mixed gas comprising the inert gas and the oxidizing gas or the reducing gas.
6. The method for forming a transparent conductive film as set forth in any one of
30 claims 1 to 5, wherein the oxidizing atmosphere comprises oxygen, water vapor, oxygen-containing gases or water vapor-containing gases.

7. The method for forming a transparent conductive film as set forth in any one of claims 1 to 6, wherein the metal fine particles and/or the alloy fine particles are those each comprising an organic compound adhered to the surroundings thereof.

8. A transparent electrode being composed of the transparent conductive film
5 formed by the method as set forth in any one of claims 1 to 7.